

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20221
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/854,779	05/14/2001	Hans Kragl	Prinz 109	8165	
7	590 02/13/2003				
COOK, ALEX, MC FARRON, MANZO, CUMMINGS & MEHLER, LTD. 200 West Adams Street - Suite 2850			EXAMINER		
			NORRIS, JEREMY C		
Chicago, IL 60603-5206			ART UNIT	PAPER NUMBER	
			2827		
			DATE MAILED: 02/13/2003	DATE MAILED: 02/13/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

Application No. Application No. Application No. Barbaration Barbaration No. Barbaration No.				
### Examiner Art Unit Jeremy C, Norris 2827 **The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. **In the MAILING DATE OF THIS COMMUNICATION.** **In the Mailing Date of This	•	Application No.	Applicant(s)	,
Jeremy C. Norris 2827		09/854,779	KRAGL ET AL.	
The MALING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MALING DATE OF THIS COMMUNICATION. The Maling Date of the time right servicible under the provisories of 3 CPR 1.136(s). In so event, however, may a righty be timely filled. The period for reply specified above is less than thirty (80) days, a righty within the statisticy minimum of thirty (80) days will be considered timely. If the period for reply specified shows, the maximum statutery period vial long prior with one statistics of the period of the communication. The period for reply specified shows, the maximum statutery period vial long vial vial replication of the period of this communication. The period of the communication, even if timely (8cd, may reduce a right). Any righty received by the Office lister than three mobilits after the malified date of the communication, even if timely (8cd, may reduce a right). From the specification is office in the firms mobility after the malified date of the communication, even if timely (8cd, may reduce a right). **Status**	Office Action Summary	Examiner	Art Unit	0
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - and SEX (1) MONTHS for the product of the product of 3° 10° 11.30(a). In no event, however, may a reply be timely filed series and control in products at 3° 10° 11.30(a). In no event, however, may a reply be timely filed series (1) MONTHS for the product of the prod		<u> </u>		
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Estherations of them maybe available under the provision of 3° CFR 1.35(a). In or event, however, may a righty be timely filled Estheration of them maybe available under the provision of 3° CFR 1.35(a). In or event, however, may a righty be timely filled If the period for reply is specified above is less than thirty (30) days, a rorply whilin the datation minimum of thirty (30) days will be considered timely. If the period for reply is specified above is less than thirty (30) days, a rorply whilin the period for reply will, by a statis, cause the application to become ARANDONED (30 U.S.C. § 133). If the period for reply is specified above is less than thirty (30) days, a rorply whilin the set or estimated provided in the period of		ears on the cover she	et with the correspondence ac	ddress
1) □ Responsive to communication(s) filed on 18 November 2002. 2a) □ This action is FINAL. 2b) □ This action is non-final. 3) □ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) □ Claim(s) 1-31 is/are pending in the application. 4a) Of the above claim(s) 7-14.16-19 and 22-31 is/are withdrawn from consideration. 5) □ Claim(s) is/are allowed. 6) □ Claim(s) 1-6.20 and 21 is/are rejected. 7) □ Claim(s) 1-5 is/are objected to. 8) □ Claim(s) 1-5 is/are objected to. 8) □ Claim(s) 1-6 is/are abjected to restriction and/or election requirement. Application Papers 9) □ The specification is objected to by the Examiner. 10) □ The drawing(s) filled on is/are: a) □ accepted or b) □ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) □ The proposed drawing correction filed on 24 May 2002 is: a) □ approved b) □ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12 □ □ The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. § 119 and 120 13) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) □ All b) □ Some * c) □ None of: 1. □ Certified copies of the priority documents have been received. 2. □ Certified copies of the priority documents have been received. 2. □ Certified copies of the priority documents have been received in Application No. □ □ □ The translation of the foreign language provisional application has been received. 14) □ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10 □ Notice of References Cited (PTO-892) 11 □ Notice of Oratsperson's Patent Drawing Review (PTO-948)	 THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply is specified above, the maximum statutory period with Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). 	36(a). In no event, however, now within the statutory minimum will apply and will expire SIX (6 cause the application to beco	nay a reply be timely filed of thirty (30) days will be considered time MONTHS from the mailing date of this of me ABANDONED (35 U.S.C. § 133).	
2a) This action is FINAL. 2b) This action is non-final. 3 Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-31 is/are pending in the application. 4a) Of the above claim(s) 7-14.16-19 and 22-31 is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 1-6.20 and 21 is/are rejected. 7) Claim(s) 1-5 is/are objected to. 8) Claim(s) 1-5 is/are objected to. 8) Claim(s) 1-5 is/are objected to. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) The proposed drawing correction filed on 24 May 2002 is: a) approved b) disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in Application No * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. **Attachment(s) 16) Notice of References Clied (PTO-892) 17) Notice of Informal Patent Application (PCD-152)	_			
3		·		
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. Disposition of Claims	· <u> </u>			
4) □ Claim(s) 1-31 is/are pending in the application. 4a) Of the above claim(s) 7-14,16-19 and 22-31 is/are withdrawn from consideration. 5) □ Claim(s) is/are allowed. 6) □ Claim(s) is/are allowed. 6) □ Claim(s) 1-6,20 and 21 is/are rejected. 7) □ Claim(s) 15 is/are objected to. 8) □ Claim(s) are subject to restriction and/or election requirement. Application Papers 9) □ The specification is objected to by the Examiner. 10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) □ The proposed drawing correction filed on 24 May 2002 is: a) □ approved b) □ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) □ The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) □ All b) □ Some * c) □ None of: 1. □ Certified copies of the priority documents have been received in Application No 3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) □ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) □ The translation of the foreign language provisional application has been received. 15) □ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Natachment(s) Notice of Informal Patent Application (PTO-152)	closed in accordance with the practice under			ne merits is
4a) Of the above claim(s) 7-14,16-19 and 22-31 is/are withdrawn from consideration. 5) □ Claim(s) is/are allowed. 6) ☒ Claim(s) is/are allowed. 7) ☒ Claim(s) are subject to . 8) □ Claim(s) are subject to restriction and/or election requirement. Application Papers 9) □ The specification is objected to by the Examiner. 10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) ☒ The proposed drawing correction filed on 24 May 2002 is: a) ☒ approved b) □ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) □ The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. § 119 and 120 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☒ All b) □ Some * c) □ None of: 1. ☒ Certified copies of the priority documents have been received. 2. □ Certified copies of the priority documents have been received in Application No 3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) □ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) □ The translation of the foreign language provisional application has been received. 15) □ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. **Matchment(s)** 10 ☒ Notice of References Cited (PTO-892) 4) □ Interview Summary (PTO-413) Paper No(s)	· <u>_</u>			
5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or election requirement. Application Papers 9) ☐ The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) ☐ The proposed drawing correction filed on _24 May 2002 is: a) ☐ approved b) ☐ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) ☐ The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. § 119 and 120 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received. 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 120 and/or 121. Attachment(s) 10 ☐ Notice of References Cited (PTO-892) 21 ☐ Notice of Informal Patent Application (PTO-152)			m consideration	
6) ☐ Claim(s) 1-6.20 and 21 is/are rejected. 7) ☐ Claim(s) 15 is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or election requirement. Application Papers 9) ☐ The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) ☐ The proposed drawing correction filed on 24 May 2002 is: a) ☐ approved b) ☐ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) ☐ The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received. 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 120 and/or 121. Attachment(s) 10 ☐ Notice of References Cited (PTO-892) B) ☐ Notice of Informal Patent Application (PTO-152)				
7)	_			
8) Claim(s) are subject to restriction and/or election requirement. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) The proposed drawing correction filed on 24 May 2002 is: a) approved b) disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10) Notice of References Cited (PTO-892) 41 Interview Summary (PTO-413) Paper No(s)	<u> </u>			
Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) The proposed drawing correction filed on 24 May 2002 is: a) paproved b) disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in his National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10 Notice of References Cited (PTO-892) 21 Notice of Draftsperson's Patent Drawing Review (PTO-948) 50 Notice of Informal Patent Application (PTO-152)	<u> </u>	r election requiremen	i.	
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) The proposed drawing correction filed on 24 May 2002 is: a) approved b) disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10 Notice of References Cited (PTO-892) 41 Interview Summary (PTO-413) Paper No(s) 51 Notice of Informal Patent Application (PTO-152)	· · · · · · · · · · · · · · · · · · ·	4		<i>,</i>
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). 11) The proposed drawing correction filed on 24 May 2002 is: a) approved b) disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10 Notice of References Cited (PTO-892) 41 Interview Summary (PTO-413) Paper No(s). 52 Notice of Draftsperson's Patent Drawing Review (PTO-948)	9)☐ The specification is objected to by the Examine	r.		
11) ☐ The proposed drawing correction filed on 24 May 2002 is: a) ☐ approved b) ☐ disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action. 12) ☐ The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received. 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 4) ☐ Interview Summary (PTO-413) Paper No(s) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)	10)☐ The drawing(s) filed on is/are: a)☐ accep	oted or b) objected to	by the Examiner.	
If approved, corrected drawings are required in reply to this Office action. 12) ☐ The oath or declaration is objected to by the Examiner. Priority under 35 U.S.C. §§ 119 and 120 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received. 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 4) ☐ Interview Summary (PTO-413) Paper No(s) Notice of Informal Patent Application (PTO-152)	Applicant may not request that any objection to the	e drawing(s) be held in a	abeyance. See 37 CFR 1.85(a).	
Priority under 35 U.S.C. §§ 119 and 120 13) △ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) △ All b) □ Some * c) □ None of: 1. △ Certified copies of the priority documents have been received. 2. □ Certified copies of the priority documents have been received in Application No 3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) □ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) □ The translation of the foreign language provisional application has been received. 15) □ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10 △ Notice of References Cited (PTO-892) 40 □ Interview Summary (PTO-413) Paper No(s) Notice of Informal Patent Application (PTO-152)	11) The proposed drawing correction filed on 24 Ma	<u>y 2002</u> is: a)⊠ appro	oved b) disapproved by the	Examiner.
Priority under 35 U.S.C. §§ 119 and 120 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)	If approved, corrected drawings are required in rep	oly to this Office action.		
13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 1 Interview Summary (PTO-413) Paper No(s) 3 Interview Summary (PTO-413) Paper No(s) 5 Notice of Informal Patent Application (PTO-152)	12) The oath or declaration is objected to by the Ex	aminer.		,
a) ☒ All b) ☐ Some * c) ☐ None of: 1. ☒ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received. 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) 5) ☐ Notice of Informal Patent Application (PTO-152)	Priority under 35 U.S.C. §§ 119 and 120			
1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received. 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10 ☐ Notice of References Cited (PTO-892) 41 ☐ Interview Summary (PTO-413) Paper No(s) 52 ☐ Notice of Informal Patent Application (PTO-152)	13) Acknowledgment is made of a claim for foreign	priority under 35 U.S	i.C. § 119(a)-(d) or (f).	
2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 10 Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) 11 Interview Summary (PTO-413) Paper No(s)	a)⊠ All b)□ Some * c)□ None of:			
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). 5) Notice of Informal Patent Application (PTO-152)	 Certified copies of the priority documents 	s have been received		
application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s) Notice of Draftsperson's Patent Drawing Review (PTO-948)	2. Certified copies of the priority documents	s have been received	in Application No	
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). 5) Notice of Informal Patent Application (PTO-152)	application from the International Bur	reau (PCT Rule 17.2(a)).	Stage
a) The translation of the foreign language provisional application has been received. 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. Attachment(s) 1) Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) 1) Notice of Informal Patent Application (PTO-152)		•		l application)
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 4) Interview Summary (PTO-413) Paper No(s) 5) Notice of Informal Patent Application (PTO-152)	_a)	visional application h	as been received.	
1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)		o priority unider 33 U.	0.0. 33 120 and/01 121.	
	1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) 🔲 Notic	ce of Informal Patent Application (PT	

Application/Control Number: 09/854,779

Art Unit: 2827

DETAILED ACTION

Election/Restrictions

Claim 11, is withdrawn from consideration because it includes, via dependency the limitations of claim 9 which are not parcel of the elected species of figure 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,007,669 (hereafter Crumly) in view of US 6,434,819 (hereafter Rokugawa).

Crumly discloses, referring to figure 1, a circuit board, consisting of at least two individual circuit board layers (6, 8) made of plastics (see col. 2, lines 5-15) and

Application/Control Number: 09/854,779

Art Unit: 2827

produced by a formation technique, which each have first and second functional sides and at least one microstructured positioning formation (14, 20), said at least one formation being comprised of at least one projection (14) and at least one recess (20) positioned in interconnecting engagement, said at least one projection being formed on at least one of the first and second functional sides of one of said at least two individual circuit board layers, said at least one recess being formed on at least one of the first and second sides of another of said at least two individual circuit board layers and positioned in interconnecting engagement with said at least one projection, said positioning formation being formed during formation of said circuit board layers, and a metalization (21) on one of the functional sides. Crumly does not specifically disclose locating the metalization in a trench [claim 1]. However, it is well known in the art to embed conductors within a trench in multilayered PCBs to reduce the overall thickness of the device, as evidenced by Rokugawa (see conductor 15a in figure 2(e)). Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to embed the metalization of the invention of Crumly, as known in the art and demonstrated by Rokugawa. The motivation for doing so would have been to reduce the overall size of the device and thus making it adaptable to applications with tighter space constraints.

Moreover, the modified invention of Crumly discloses that the positioning formation is a protrusion [claim 2], wherein each individual layer is provided with a plurality of protrusions (14) on one side and a plurality of depressions (20) on the other, the protrusions of the one individual layer engaging into the depressions of the other

Application/Control Number: 09/854,779

Art Unit: 2827

Page 4

individual layer, so that the two individual layers are precisely positioned in relation to each other [claim 6], wherein the two individual layers are connected with each other by an electrically conductive material (see col. 2, lines 1-10) [claim 20], wherein a contact opening (20) is provided in at least one of the individual layers, the contact opening extending for the first side through the layer to the second side thereof, and that the opening is filled with an electrically conductive material (see figure 2) [claim 21]. Additionally, although the modified invention of Crumly does not specifically state that the feature is in the shape of a pyramid, Crumly does indeed state that the shape may vary (see col. 2, lines 50-60). It would have been an obvious matter to one of ordinary skill in the art to form the feature in a pyramid shape [claim 3]. Moreover, it has been held that more than a mere change of form is necessary for patentability. Span-Deck, Inc v. Fab-Con, Inc. (CA 8, 1982) 215 USPQ 835. Furthermore, it is clear that the modified invention of Crumly discloses the position feature to be a depression (20) [claim 4], complementary to any shaped protrusion (see col. 2, lines 15-25), including a pyramid-shaped protrusion [claim 5].

Response to Arguments

Applicant's arguments with respect to claims 1-6, 20 and 21 have been considered but are most in view of the new ground(s) of rejection.

Allowable Subject Matter

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2827

Conclusion

Page 5

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,666,272

Moore et al.,

US 5,825,630

Taylor et al.,

US 6,392,165

Liao,

US 6,490,168

Rochowicz et al..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 703-306-5737. The examiner can normally be reached on Mon.-Th., 9AM - 6:30 PM and alt. Fri. 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0725 for regular communications and 703-308-0725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN February 8, 2003